

Replace paragraph 0010 with the following rewritten version:

"~~An object of t~~The invention is to provide a repeater for positioning mobile station and a method thereof, in order to improve positioning accuracy of mobile stations in the coverage of the repeater."

Replace paragraph 0018 with the following rewritten version:

"(4) Reading calibrated value  $TOA_c$  of TOA between the repeater and the base station, and initiating RIT-RTT (Round Trip Time) measuring function of the base station to measure RIT-RTT of the mobile station, herein  $TOA_c = (1/2) \text{RITRTT}$ ;"

Replace paragraph 0019 with the following rewritten version:

"(5) Converting the measured RIT-RTT reported from the base station into measured value  $TOA_m$  of TOA, herein  $TOA_m = (1/2) \text{RITRTT}$ , which is the TOA from the mobile station to the base station via the repeater, subtracting the calibrated value  $TOA_c$  of TOA from the repeater to the base station from  $TOA_m$  and taking the result as TOA  $TOA_{trans}$  from the mobile station to the repeater, herein  $TOA_{trans} = TOA_m - TOA_c$ ;"

Replace paragraph 0025 with the following rewritten version:

"It is seen from above technical proposal that the repeater according to the present invention delivers cell identifier signal transmitting function, which helps to determine whether the mobile station is in the coverage of the repeater; the bandwidth of said cell identifier signal is identical to that of base station signals forwarded by the repeater; the code word of said cell identifier signal is chosen from the scrambling code set but is different from the scrambling code used by the adjacent base station; said cell identifier signal keeps a fixed time delay to pilot signal of the base station. The repeater for mobile station positioning according to the present invention is easy to implement and can meet the positioning requirement of a plurality of mobile stations in the coverage of the repeater. The method for mobile station positioning according to the present invention utilizes the cell identifier signal of the base station transmitted by above repeater (with

cell identifier signal transmitting function) and calibration for time delay of the repeater to determine whether the mobile station is in the coverage of the repeater; if so, said method utilizes TOA measuring function to further determine the distance from the mobile station to the repeater; therefore, the method improves positioning accuracy of mobile stations in the coverage of the repeater; if the mobile station is not in the coverage of the repeater, the positioning is carried out with an existing mobile station positioning method. Therefore, the present invention attains ~~the object of improving~~ positioning accuracy of mobile stations in the coverage of the repeater.”